

Fig. 1

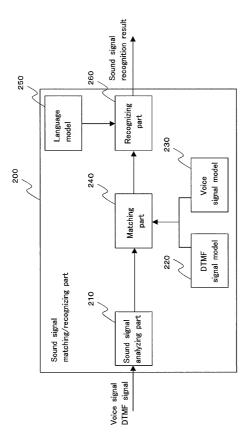
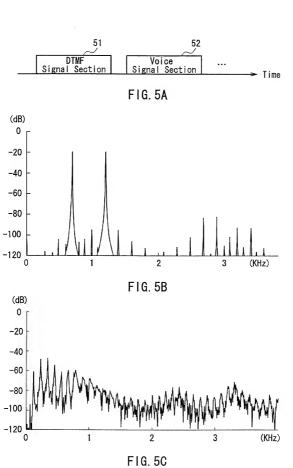


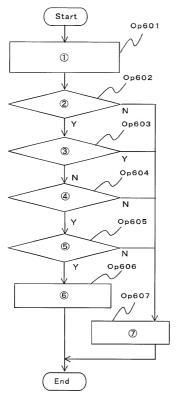
Fig. 2

Word ID	Notation	Reading (Speech)
-	0	"Zero"
2	0	"Nail.»
8	0	DTMF-0
4	-	"One"
ري د	-	DTMF-1
9	2	"Two"
7	2	DTMF-2
:		
35	YES	"Yes"
36	YES	DTMF-"*"
37	NO	"No"
38	NO	DTMF-#
:		:
		Walter

Fig. 3

Word ID	Notation	Reading (Speech)
-	0	"Zero"
-	0	"Null"
-	0	DTMF-0
2	-	"One"
2	-	DTMF-1
8	2	"Two"
3	2	DTMF-2
4	YES	"Yes"
4	YES	DTMF-"*"
മ	ON	"No"
2	NO	DTMF-#
:	:	:





- The matching part 240 detects two peak frequencies f1 and f2 from the wave form spectrum of an input signal
- ② Is there any corresponding frequency in the DTMF frequency table
- ③ Is a level difference between the detected two peak frequencies a predetermined threshold value or higher?
- (4) Is a level difference (L1-L3) between the detected two peak frequencies a preditermined threshold value or higher?
- s Is a difference (L1-L4) between an average value L4 of the level in a frequency portion other than the frequency ranges of $f1\pm\alpha$ and $f2\pm\alpha$ and the level value L1 of f1 a threshold value or higher?
- A sound signal is recognized based on the DTMF frequency table
- The matching part 240 outputsthe score "0" as a result of matching process with reference to the DTMF signal model 220

Fig. 6

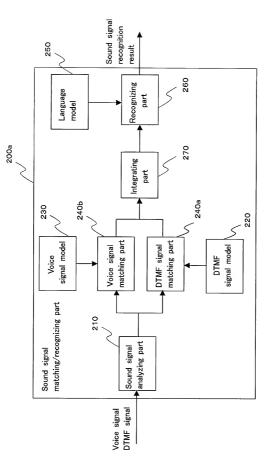


Fig. 7



FIG. 8

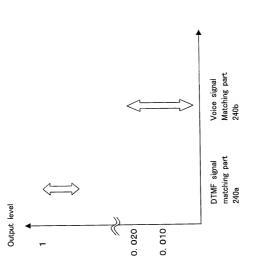


Fig. 9

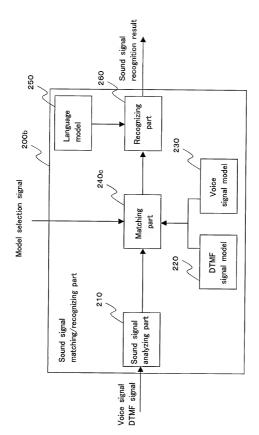


Fig. 10

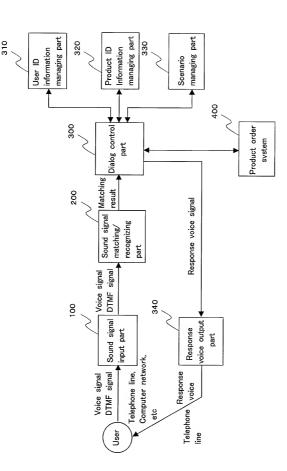


Fig. 1

TOOMETHS CEEDOE

U5:Kawasaki city Nakahara "4"_"1" ("4" and "1" are inputted by tough tone U3:1 would like one piece of Product No. "3821"("3821" is inputted by U4:"YES"(button "*" is pressed and "YES" is inputted by tough tone) S4:You are Mr. Washio of User ID 1212? Desired product, please. Dialog Example: (U:User input, S:Response from a dialog system) S6:Kawasaki city Nakahara 4-1? Your order is accepted U1:"1212" ("1212" is inputted by tough tone) S1: Thank you very much for joining us. S5: One car wax of product No. 3821. S7:Thank. Please join us again S6:Your address, please S3:Your name, please. S2:User ID, please. tough tone). U2:Washio

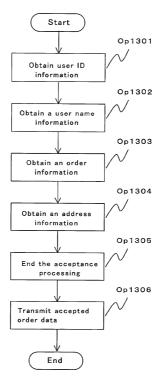


Fig. 13

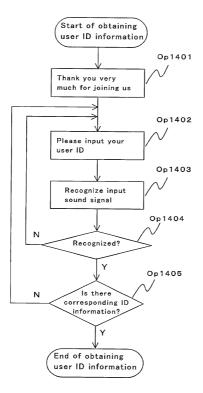


Fig. 14

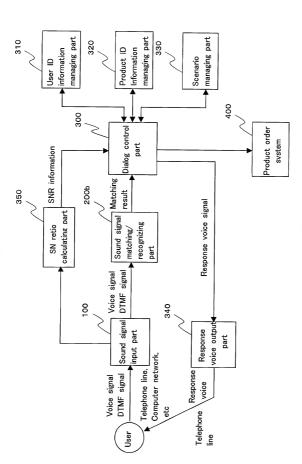
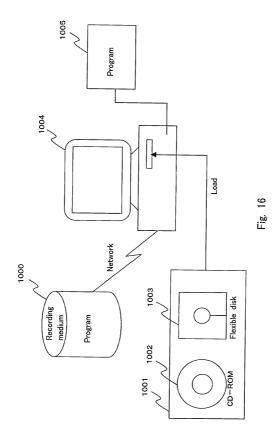


Fig. 15



LODELITE OFFICE

1633	A	В	O	٥
1477	ю	9	o	#
1336	2	2	8	0
1209		4	7	*
Frequency [Hz]	269	770	852	941

(PRIOR ART)

Fig. 17

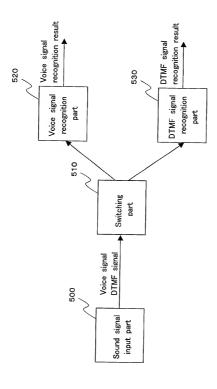


Fig. 18

(PRIOR ART)